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(71) Applicant *(for all designated States except US)*: **CARRIER CORPORATION** [US/US]; One Carrier Place, Farmington, CT 06034 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **MITRA, Biswajit** [IN/US]; 201 Grenadier Drive, Apt. F, Liverpool, NY 13090 (US). **CHEN, Yu H.** [US/US]; 4745 Edgeworth Drive, Manlius, NY 13104 (US).

(74) Agent: **HABELT, William W.**; 250 South Clinton Street, Suite 300, Syracuse, NY 13202 (US).

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(54) **Title:** REFRIGERANT VAPOR COMPRESSION SYSTEM WITH FLASH TANK ECONOMIZER

(57) **Abstract:** A refrigerant vapor compression system includes a flash tank disposed in series refrigerant flow relationship in the refrigerant circuit intermediate a refrigerant heat rejection heat exchanger and a refrigerant heat absorption heat exchanger. A primary expansion valve is interdisposed in the refrigerant circuit upstream of the refrigerant heat absorption heat exchanger and a secondary expansion valve is interdisposed in the refrigerant circuit upstream of the flash tank. A refrigerant vapor line is provided to direct refrigerant vapor from the flash tank to an intermediate pressure stage of the compression process. A refrigerant-to-refrigerant heat exchanger operates to transfer heat from refrigerant flowing through the primary refrigerant circuit to refrigerant flowing through the refrigerant vapor line.

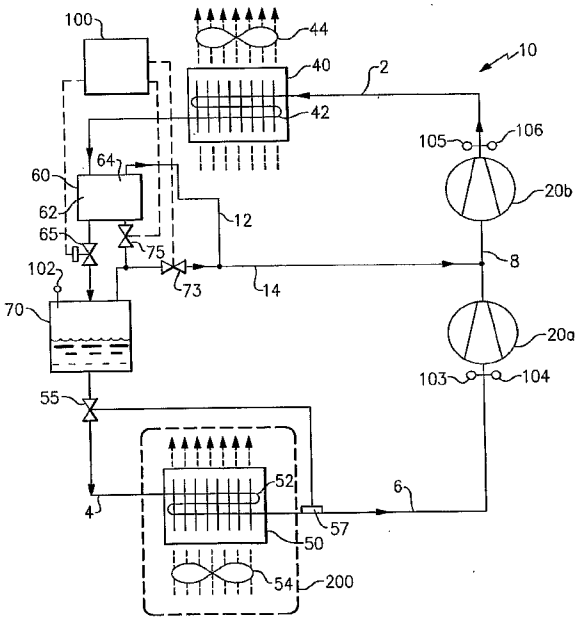

FIG.1

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